

AD-A071 425

ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
19304D GSRS MISSILE NUMBER 1026 ROUND NUMBER V-25. (U)

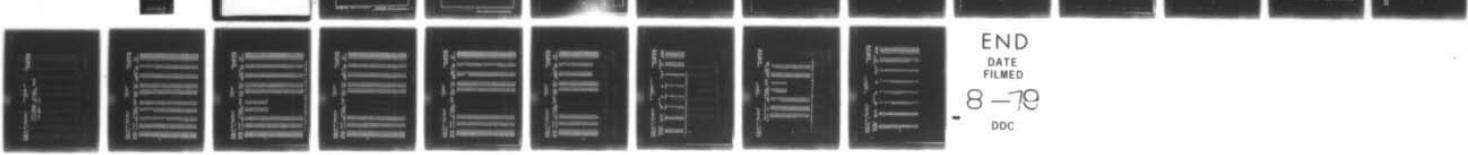
APR 79

UNCLASSIFIED

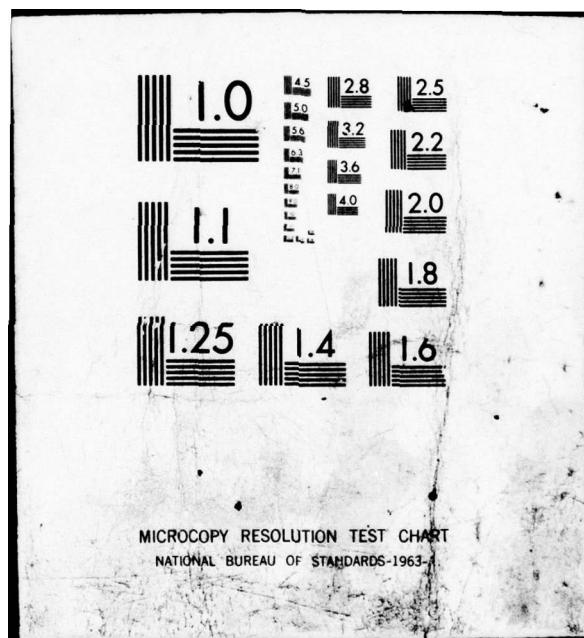
ERADCOM/ASL-DR-1012

NL

| OF |
AD
A071-25



END
DATE
FILMED
8-79
DDC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963

DA071425

REPORT DOCUMENTATION PAGE			READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1012	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle) 19304D GSRS Missile No. 1026 Round No. V-25		5. TYPE OF REPORT & PERIOD COVERED	
7. AUTHOR(s) WSMR Meteorological Team		8. CONTRACT OR GRANT NUMBER(s) DA Task 1T6657-2D126-02	
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS	
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Comd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico		12. REPORT DATE May 1979	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research & Development Comd		13. NUMBER OF PAGES	
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		15. SECURITY CLASS. (of this report) UNCLASSIFIED	
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
18. SUPPLEMENTARY NOTES			
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) 1. Ballistics 2. Meteorology 3. Wind			
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 19304D GSRS, Missile Number 1026, Round Number V-25, are presented in tabular form.			

SECURITY CLASSIFICATION OF THIS PAGE: UNCLASSIFIED

The University of Texas at Austin - Department of Sociology - Sociology 393 - Spring 2013

CONTENTS

	PAGE
INTRODUCTION -----	1
DISCUSSION -----	1
MAP -----	2
TABLES	
I. Surface Observations Taken at 0942 MDT at LC-33 -----	3
II. Anemometer Measured Wind Speed and Direction, LC-33 Fixed Pole, Taken at 0940 MDT -----	4
III. Anemometer Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, Taken at 0940 MDT -----	5
IV. Pilot-Balloon-Measured Wind Data at 0942 MDT -----	6-7
V. SMR Significant Level Data at 0830 MST -----	8-9
VI. SMR Upper Air Data at 0830 MST -----	10-14
VII. MRN Significant Levels at 0830 MST -----	15
VIII. SMR Mandatory Levels at 0830 MST -----	16
IX. SMR MRN Mandatory Levels at 0830 MST -----	17

Accession For	
NTIS GR&I	
DDC TAB	
Unannounced	
Justification _____	
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or special
A	

INTRODUCTION

19304D GSRS, Missile Number 1026, Round Number Y-25, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0940 MDT, 30 April 1979. The scheduled launch time was 0930 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

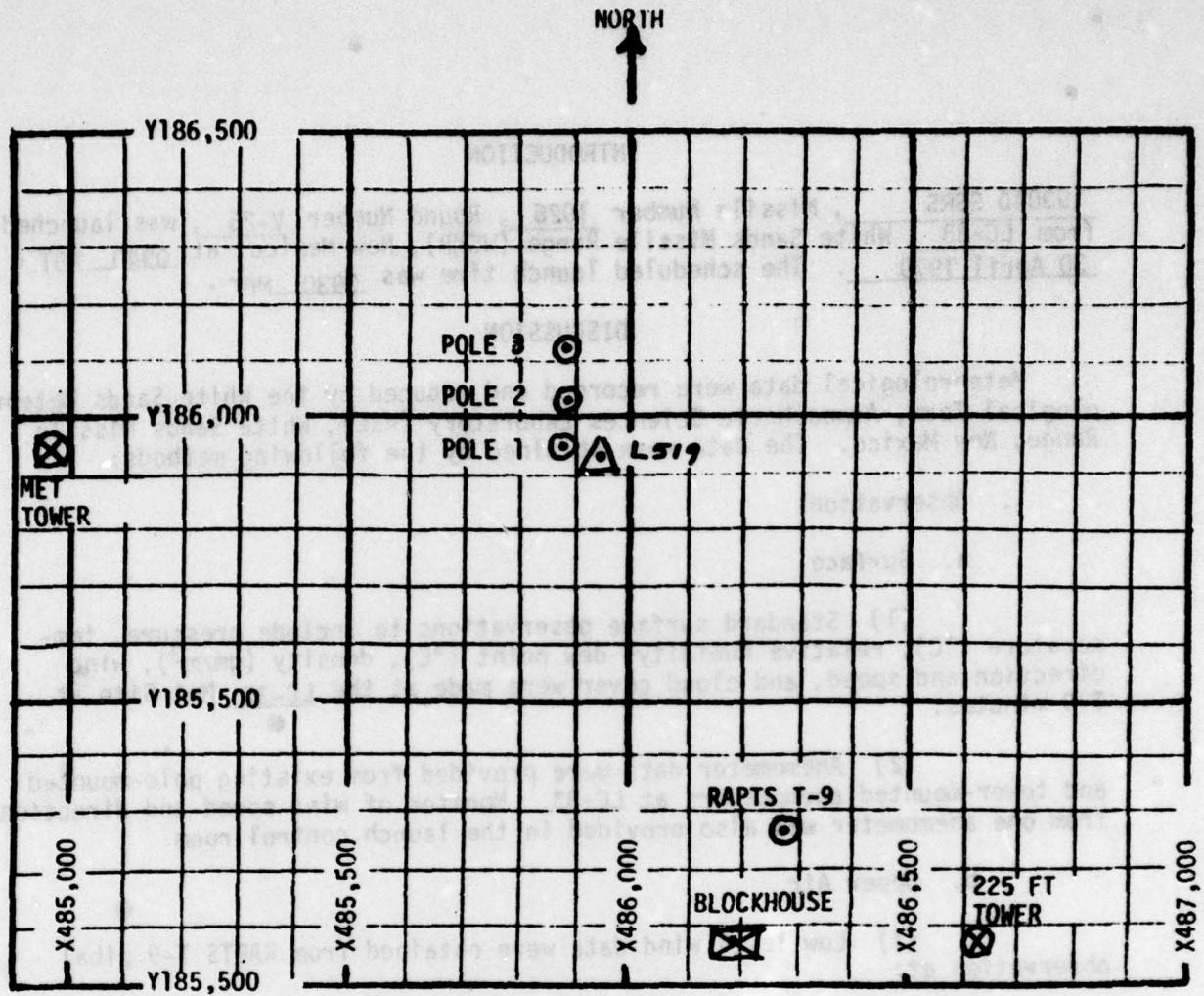
SITE AND ALTITUDE

LC-33 1080 meters (30-meter increments)

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 96.500 feet in 500-feet increments.

SITE AND TIME

SMR 0830 MST



1. MET TOWER - 4 Bendix Model T-120 Anemometers at 12 ft, 62 ft, 102 ft and 202 ft with E/A recorders.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.
 - (a) Pole #1 - 38.7 ft
 - (b) Pole #2 - 53.0 ft
 - (c) Pole #3 - 83.6 ft
3. 225 FT WIND TOWER - 5 Bendix Model T-120 Anemometers at 35 ft, 88 ft, 128 ft, 168 ft and 200 ft with 5 X-Y visual indicators in Blockhouse.
4. RAPTS T-9 - Radar Automatic Pilot-Balloon Tracking System T-9 Radar

2011 RELEASE UNDER E.O. 14176

EX 3.104

SI 3.104

13 3.104

3417-1
332

03302

HRM

336

The data are presented in the following tabulations:

ELLEVATION	3977.30	FEET/MSL
PRESSURE	879.4	MBSA
TEMPERATURE	17.4	°C
RELATIVE HUMIDITY	67	%
DEW POINT	11.2	°C
DENSITY	1049	GM/ML ³
WIND SPEED	4	MPH
WIND DIRECTION	130	DEGREES
CLOUD COVER	7	Sc

TABLE I. SURFACE OBSERVATIONS TAKEN AT 0942 MDT, 30 APRIL 1979 AT LC-33, 19304D GSRS, MISSILE NO. 1026, ROUND NO. V-25.

LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	162	04	-30	173	05	-30	168	08
-20	162	04	-20	165	05	-20	171	07
-10	165	04	-10	189	04	-10	168	07
0.0	166	04	0.0	198	05	0.0	177	08
+10	191	04	+10	203	04	+10	180	08

POLE #1 = X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL

TABLE II

TYPE 19304D GSRS MISSILE NO. 1026 ROUND NO. V-25

LAUNCHED FROM LC-33 DATE 30 April 1979 TIME 0940 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH

OR TRUE NORTH TRUE NORTH.

LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1 12 ft			LEVEL #2 62 ft		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	164	3	-30	153	8
-20	153	8	-20	147	10
-10	159	9	-10	141	9
0.0	161	10	0.0	146	10
+10	158	9	+10	150	9
LEVEL #3 102 ft			LEVEL #4 202 ft		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	163	8	-30	141	8
-20	158	10	-20	147	9
-10	158	10	-10	149	9
0.0	163	9.5	0.0	149	8
+10	160	9.5	+10	147	8

WTSM COORDINATES: X484, 82.64 Y185, 957.73 H3983.00 (base)

TABLE III

TYPE 19304D GSRS MISSILE NO. 1024 ROUND NO. V-25

LAUNCHED FROM LC-33 DATE 30 April 1979 TIME 0940 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH

OR TRUE NORTH TRUE NORTH

PILOT BALLOON MEASURED WIND DATA
(30 meter increments)

TABLE IV

RELEASED FROM LC-33 DATE 30 April 1979 TIME 0942 MDT
 RELEASE POINT COORDINATES (WSTM) X= 486.037.24 Y= 182.350.16 H= 3977.30
 MISSILE TYPE 19304D GSRS MISSILE NO. 1026 ROUND NO. V-25
 MISSILE LAUNCHED FROM LC-33 DATE 30 April 1979 TIME 0940 MDT
 NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH
 OR TRUE NORTH TRUE NORTH.

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
SFC	130	4.0
30	134	4.0
60	137	3.5
90	140	3.5
120	143	3.0
150	143	4.5
180	143	5.5
210	143	7.0
240	143	8.0
270	143	8.0
300	143	8.0
330	143	8.0
360	142	8.0

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
390	142	8.0
420	142	8.0
450	142	8.0
480	141	8.0
510	142	8.5
540	142	8.5
570	143	8.5
600	143	8.5
630	147	8.5
660	150	8.0
690	154	7.5
720	157	7.0
750	157	7.5

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
780	156	8.0
810	155	8.5
840	154	9.0
870	158	10.0
900	161	11.0
930	164	12.0
960	167	13.0
990	168	13.5
1020	169	13.5
1050	170	13.5
1080	171	13.5
1110		
1140		
1170		
1200		
1230		
1260		
1290		
1320		
1350		
1380		
1410		

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
1440		
1470		
1500		
1530		
1560		
1590		
1620		
1650		
1680		
1710		
1740		
1770		
1800		
1830		
1860		
1890		
1920		
1950		
1980		
2010		
2040		
2070		

STATION ALTITUDE 3997.30 FEET MSL
30 APR. 79 0630 HRS MST
ASCENSION NO. 81

SIGNIFICANT LEVEL DATA
1200060031
S M R

GEODETIC COORDINATES
32°48'34" LAT DEG
106°42'30" LON DEG

PRESSURE GEOMETRIC
MILLIBARS ALTITUDE
MILLIBARS MSL FEET

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE FEET	TEMPERATURE DEGREES	AIR DEPOINT CENTIGRADE	REL.HUM. PERCENT
876.1	3997.3	17.7	10.1	61.0
850.0	4904.0	12.7	8.2	74.0
813.3	6117.1	9.6	8.2	91.0
790.7	6885.3	8.1	6.2	68.0
779.9	7259.0	8.1	2.0	69.0
760.3	7952.2	10.1	-4.3	36.0
740.6	8661.3	9.9	-14.0	17.0
700.0	10194.2	5.6	-15.0	20.0
662.6	11649.6	1.4	-15.5	27.0
624.8	13202.9	-1.8	-11.9	46.0
607.3	13944.9	-2.4	-24.7	16.0
547.8	16604.4	-8.4	-29.7	16.0
529.8	17454.9	-9.4	-29.2	18.0
513.8	18232.2	-10.7	-32.4	15.0
500.0	18918.4	-12.5	-28.4	25.0
450.8	21491.5	-18.3	-28.3	41.0
443.3	21903.0	-19.2	-26.3	53.0
400.0	24396.4	-23.6	-35.5	33.0
307.3	30535.2	-39.5	-49.5	33.0
300.0	31075.3	-40.9		
266.8	33664.4	-47.6		
250.0	35070.7	-50.4		
200.0	3979.2	-60.4		
175.3	42431.9	-65.8		
162.8	43908.1	-67.1		
154.8	44917.2	-64.4		
150.0	45553.3	-63.6		
115.8	50803.6	-62.6		
108.8	52078.1	-60.6		
100.0	53804.3	-62.1		
95.8	54678.1	-62.8		
78.3	58019.9	-58.7		
75.3	59631.7	-57.8		
70.0	61144.5	-59.8		
62.8	63375.9	-61.4		
59.3	64554.8	-59.9		
50.0	68005.5	-61.0		
30.0	78848.0	-49.3		
27.3	80889.3	-50.2		
24.8	82979.6	-46.9		

STATION ALTITUDE 3997.30 FEET MSL
30 APR. 79 0830 HRS MST
ASCENSION NO. 81

SIGNIFICANT LEVEL DATA
1200060081
S M R

GEOGRAPHIC COORDINATES
32° 48' 03" LAT DEG
106° 42' 30" LONG DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE
20.0	87790.5	-46.6
13.3	96750.7	-42.3

!

STATION ALTITUDE 3997.30 FEET MSL
30 APR. 79 0830 HRS MST
ASCENSION NO. 81

UPPER AIR DATA
1200060081
S M R

GEODETIC COORDINATES
32°48'03" LAT DEG
106°42'30" LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TIN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3997.3	878.1	17.7	10.1	61.0	1046.1	666.2	170.0	8.0
4000.0	878.0	17.7	10.1	61.0	1046.1	666.2	170.0	8.0
4500.0	862.4	14.9	9.1	68.2	1037.6	662.9	169.9	7.4
5000.0	847.0	12.5	8.2	75.3	1026.1	660.0	169.9	6.9
5500.0	831.8	11.2	8.3	82.4	1014.0	658.5	169.8	6.4
6000.0	816.8	9.9	8.2	89.4	1000.2	657.1	169.5	6.0
6500.0	802.0	8.9	7.2	89.5	985.9	655.8	168.6	6.6
7000.0	787.4	8.1	5.2	82.2	971.1	654.7	175.3	6.9
7500.0	773.0	8.8	.9	57.5	952.1	655.2	194.8	7.0
8000.0	752.0	10.1	-4.8	34.7	931.5	656.3	225.1	7.9
8500.0	745.2	9.9	-11.1	21.5	915.8	655.9	252.3	11.1
9000.0	731.6	8.9	-14.3	17.7	902.5	654.7	268.7	13.5
9500.0	718.2	7.5	-14.8	16.6	890.4	653.0	281.4	15.6
10000.0	705.0	6.1	-15.3	19.6	878.5	651.4	289.8	15.6
10500.0	692.0	4.7	-15.4	21.5	866.7	649.7	295.5	15.7
11000.0	679.2	3.3	-15.4	23.9	855.0	646.0	289.2	17.1
11500.0	666.5	1.8	-15.5	26.3	843.5	646.4	281.7	18.7
12000.0	654.0	0.7	-14.4	31.3	831.1	645.9	273.3	21.0
12500.0	641.7	-4	-13.1	37.4	618.4	643.9	263.3	23.7
13000.0	629.6	-1.4	-12.2	43.5	605.9	642.7	254.5	27.0
13500.0	617.7	-2.0	-15.8	34.0	792.9	641.8	249.7	29.8
14000.0	606.0	-2.5	-24.8	16.0	779.7	641.0	247.2	31.8
14500.0	594.4	-3.7	-25.8	16.0	767.9	639.7	250.5	29.9
15000.0	583.0	-4.8	-26.7	16.0	756.4	638.3	254.9	28.2
15500.0	571.6	-5.9	-27.6	16.0	745.0	637.0	250.6	26.8
16000.0	560.8	-7.0	-28.5	16.0	733.8	635.6	262.5	26.5
16500.0	550.0	-8.2	-29.5	16.0	722.8	634.3	263.6	26.5
17000.0	539.4	-8.9	-29.4	16.9	710.7	633.4	267.4	27.7
17500.0	528.9	-9.5	-29.4	17.8	698.5	632.7	270.7	29.8
18000.0	518.5	-10.3	-31.3	15.9	687.0	631.7	273.3	33.2
18500.0	508.4	-11.4	-30.4	18.9	670.4	630.4	273.7	34.1
19000.0	498.4	-12.7	-28.3	25.5	666.2	629.9	273.6	34.1
19500.0	488.4	-13.8	-28.1	28.6	655.6	627.5	273.7	32.5
20000.0	478.7	-14.9	-28.0	31.7	645.5	629.2	273.9	32.5
20500.0	469.2	-16.1	-29.0	34.8	635.4	624.6	274.3	33.9
21000.0	459.8	-17.2	-28.1	37.9	625.5	623.4	276.8	36.4
21500.0	450.6	-18.3	-28.2	41.2	615.7	622.1	280.3	39.5
22000.0	441.5	-19.4	-26.7	52.2	605.6	620.6	263.4	42.8
22500.0	432.5	-20.3	-28.4	48.2	595.6	619.6	280.1	46.2
23000.0	423.7	-21.2	-30.1	44.2	585.6	618.5	280.6	48.4

STATION ALTITUDE 3997.30 FEET MSL
30 APR. 79 0630 HRS MST
ASCENSION NO. 81

UPPER AIR DATA
1200060081
S H R

GEOGRAPHIC COORDINATES
32°48'34" LAT DEG
106°42'30" LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	415.1	-22.1	40.2	575.8	617.3	286.5	50.2	1.000131
24000.0	406.6	-23.1	36.2	566.2	616.2	286.9	51.3	1.000128
24500.0	398.2	-24.1	35.7	556.8	614.9	287.4	52.2	1.000126
25000.0	389.8	-25.3	36.8	547.8	615.3	288.5	52.7	1.000124
25500.0	381.5	-26.6	38.0	538.9	611.8	289.7	53.2	1.000121
26000.0	373.4	-27.9	39.1	530.3	610.2	290.2	53.6	1.000119
26500.0	365.4	-29.2	40.3	521.7	608.6	290.7	54.3	1.000117
27000.0	357.7	-30.5	41.4	513.3	607.0	289.7	55.5	1.000115
27500.0	350.1	-31.7	42.6	505.1	605.4	288.7	56.8	1.000113
28000.0	342.6	-33.0	43.7	497.0	603.7	287.4	58.9	1.000112
28500.0	335.4	-34.3	44.9	489.1	602.1	286.1	61.1	1.000110
29000.0	328.2	-35.6	46.0	481.3	600.5	286.7	60.3	1.000108
29500.0	321.3	-36.9	47.2	473.6	598.9	287.3	59.4	1.000106
30000.0	314.4	-38.1	48.3	466.1	597.3	287.9	58.7	1.000104
30500.0	307.6	-39.4	49.5	458.7	595.6	288.5	58.1	1.000103
31000.0	301.0	-40.7	46.0	451.1	594.0	288.4	58.8	1.000101
31500.0	294.3	-42.0	43.3	443.5	592.3	288.3	59.6	1.000099
32000.0	287.7	-43.3	44.6	436.0	590.6	288.3	60.7	1.000097
32500.0	281.3	-45.0	42.8	428.7	589.0	288.5	62.3	1.000095
33000.0	275.0	-45.9	42.5	421.5	587.3	289.3	65.5	1.000094
33500.0	268.8	-47.2	41.4	414.4	585.6	290.3	68.4	1.000092
34000.0	262.7	-46.3	40.6	406.9	584.2	291.3	70.5	1.000091
34500.0	256.7	-49.3	39.9	399.4	582.9	292.7	73.0	1.000089
35000.0	250.8	-50.3	39.2	392.0	581.6	293.6	76.0	1.000087
35500.0	244.9	-51.3	38.4	384.7	580.2	294.5	79.2	1.000086
36000.0	239.2	-52.4	37.7	377.4	578.8	295.4	82.8	1.000084
36500.0	233.6	-53.4	37.0	370.3	577.4	296.3	85.8	1.000082
37000.0	228.1	-54.5	36.3	363.4	576.0	297.2	86.8	1.000081
37500.0	222.7	-55.6	356.6	574.6	298.0	87.8	1.000079	
38000.0	217.5	-56.6	349.9	573.2	298.0	85.4	1.000078	
38500.0	212.4	-57.7	343.4	571.8	299.2	83.0	1.000076	
39000.0	207.4	-58.8	337.0	570.4	299.2	80.2	1.000075	
39500.0	202.5	-59.8	330.7	569.0	299.1	77.4	1.000074	
40000.0	197.6	-60.9	324.4	567.6	298.6	76.3	1.000072	
40500.0	192.8	-61.9	318.0	560.2	297.8	76.5	1.000071	
41000.0	188.1	-62.9	311.7	564.9	297.1	77.0	1.000069	
41500.0	183.5	-63.9	305.6	563.5	296.7	78.0	1.000068	
42000.0	179.1	-64.9	299.6	562.2	296.4	78.4	1.000067	
42500.0	174.7	-65.9	293.6	560.9	296.6	76.7	1.000065	
43000.0	170.4	-66.3	286.9	560.3	296.8	74.9	1.000064	

AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL
30 APR. 79 0630 HRS MST
ASCENSION NO. 81

UPPER AIR DATA
1200060081
S M R

GEOMETRIC ALTITUDE HSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS METER	WIND DATA DIRECTION DEGREES(SITN)	INDEX OF REFRACTION
4350.0	166.2	-66.7			280.4	559.7	297.1	1.000062
4400.0	162.1	-66.9			273.7	559.6	297.3	1.000061
4450.0	158.1	-65.5			265.2	561.4	297.5	1.000059
4500.0	154.2	-64.3			257.1	563.0	297.6	1.000057
4550.0	150.4	-63.7			250.1	563.9	297.7	1.000056
4600.0	146.7	-63.5			243.8	564.1	297.9	1.000054
4650.0	145.2	-63.4			237.8	564.2	297.7	1.000053
4700.0	139.7	-63.3			231.9	564.3	297.2	1.000052
4750.0	136.3	-63.2			226.2	564.4	296.6	1.000050
4800.0	133.0	-63.1			220.5	564.6	295.2	1.000049
4850.0	129.7	-63.0			215.1	564.7	293.6	1.000048
4900.0	126.6	-62.9			209.7	564.8	291.9	1.000047
4950.0	123.5	-62.8			204.6	565.0	290.2	1.000046
5000.0	120.4	-62.8			199.5	565.1	289.2	1.000044
5050.0	117.5	-62.7			194.5	565.2	289.1	1.000043
5100.0	114.7	-62.3			189.5	565.7	289.3	1.000042
5150.0	111.9	-61.5			184.2	566.6	290.9	1.000041
5200.0	109.2	-60.7			179.1	567.0	292.5	1.000040
5250.0	106.6	-61.0			175.0	567.5	293.3	1.000039
5300.0	104.0	-61.4			171.1	566.9	294.1	1.000038
5350.0	101.5	-61.8			167.3	566.3	293.7	1.000037
5400.0	99.0	-62.3			163.6	565.8	292.6	1.000036
5450.0	96.6	-62.7			159.9	565.2	292.0	1.000035
5500.0	94.3	-62.5			156.0	565.5	291.3	1.000034
5550.0	92.0	-62.0			151.8	566.1	290.8	1.000033
5600.0	89.8	-61.5			147.6	566.6	291.4	1.000032
5650.0	87.7	-61.0			144.0	567.4	292.0	1.000031
5700.0	85.6	-60.5			140.2	566.1	293.2	1.000030
5750.0	83.5	-60.0			136.5	566.8	294.7	1.000029
5800.0	81.5	-59.5			132.9	569.4	297.1	1.000028
5850.0	79.5	-59.0			129.4	570.1	300.6	1.000027
5900.0	77.6	-58.5			126.0	570.6	304.2	1.000026
5950.0	75.6	-57.9			122.7	571.5	307.2	1.000025
6000.0	74.0	-58.3			119.9	571.1	310.8	1.000024
6050.0	72.2	-58.9			117.4	570.2	305.9	1.000023
6100.0	70.5	-59.6			115.0	569.3	299.9	1.000022
6150.0	68.8	-60.1			112.5	568.7	292.9	1.000021
6200.0	67.1	-60.4			110.0	568.2	285.2	1.000020
6250.0	65.5	-60.8			107.5	567.7	280.5	1.000019
6300.0	64.0	-61.1			105.1	567.3	284.0	1.000018

STATION ALTITUDE 3997.30 FEET MSL
30 APR. 79 0830 HRS MST
ASCENSION NO. 61

UPPER AIR DATA
1200060061
S M R

GEODETIC COORDINATES
32°48'34" LAT DEG
106°42'37" LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
63500.0	62.4	-61.2	102.6	567.1	287.6	16.8	1.0000023	
64000.0	60.9	-60.6	99.9	568.0	295.2	14.7	1.0000022	
64500.0	59.5	-60.0	97.2	568.8	306.7	12.4	1.0000022	
65000.0	58.0	-60.0	94.9	568.7	321.6	10.4	1.0000021	
65500.0	56.6	-60.2	92.7	568.5	342.2	8.3	1.0000021	
66000.0	55.3	-60.4	90.5	568.3	10.4	7.6	1.0000020	
66500.0	54.0	-60.5	88.4	568.1	7.5	6.0	1.0000020	
67000.0	52.7	-60.7	86.3	567.9	5.5	8.3	1.0000019	
67500.0	51.4	-60.8	84.3	567.7	350.0	6.8	1.0000019	
68000.0	50.2	-61.0	82.4	567.5	332.7	10.0	1.0000018	
68500.0	49.0	-60.5	80.3	568.1	320.0	11.6	1.0000018	
69000.0	47.8	-60.0	78.2	568.8	312.6	12.7	1.0000017	
69500.0	46.7	-59.4	76.2	569.5	306.9	12.9	1.0000017	
70000.0	45.6	-58.9	74.2	570.2	301.5	13.3	1.0000017	
70500.0	44.6	-58.4	72.3	571.0	299.4	12.0	1.0000016	
71000.0	43.5	-57.8	70.4	571.7	297.2	10.6	1.0000016	
71500.0	42.5	-57.3	68.6	572.4	294.8	9.1	1.0000015	
72000.0	41.5	-56.7	66.8	573.1	293.6	7.1	1.0000015	
72500.0	40.5	-56.2	65.1	573.8	291.6	5.1	1.0000014	
73000.0	39.6	-55.6	63.4	574.6	286.9	3.7	1.0000014	
73500.0	38.7	-55.1	61.6	575.3	278.1	2.8	1.0000014	
74000.0	37.7	-54.6	60.2	576.0	262.1	2.1	1.0000013	
74500.0	36.9	-54.0	58.6	576.7	258.2	2.7	1.0000013	
75000.0	36.0	-53.5	57.1	577.4	258.7	3.8	1.0000013	
75500.0	35.2	-52.9	55.6	578.1	259.5	4.8	1.0000012	
76000.0	34.3	-52.4	54.2	578.8	265.6	7.1	1.0000012	
76500.0	33.5	-51.8	52.6	579.5	268.7	9.3	1.0000012	
77000.0	32.7	-51.3	51.4	580.3	270.8	11.5	1.0000011	
77500.0	32.0	-50.8	50.1	581.0	272.6	13.6	1.0000011	
78000.0	31.2	-50.2	48.6	581.7	273.9	15.6	1.0000011	
78500.0	30.5	-49.7	47.5	582.4	272.6	16.3	1.0000011	
79000.0	29.8	-49.4	46.4	582.8	270.0	16.0	1.0000010	
79500.0	29.1	-49.6	45.4	582.5	267.1	15.7	1.0000010	
80000.0	28.4	-49.8	44.4	582.2	263.2	14.4	1.0000010	
80500.0	27.8	-50.0	43.4	581.9	258.1	13.0	1.0000010	
81000.0	27.2	-50.0	42.4	581.9	251.8	11.6	1.0000009	
81500.0	26.5	-49.2	41.3	581.0	254.0	12.0	1.0000009	
82000.0	25.9	-48.4	40.2	584.0	256.2	12.4	1.0000009	
82500.0	25.4	-47.7	39.2	582.0	257.3	12.5	1.0000009	
83000.0	24.8	-46.9	38.6	586.0	253.5	11.7	1.0000008	

STATION ALTITUDE 3977.30 FEET MSL
30 APR. 79 0830 HRS MST
AS, Elevation 1.0. 01

UPPER AIR DATA
1200060001
S M R

GEOGRAPHIC COORDINATES
32°48'03" LAT DEG
106°42'30" LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES	AIR DEPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(STN)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	24.2	-46.9			37.3	586.0	249.1	10.8	1.000008
64000.0	23.7	-46.8			36.4	586.1	244.0	10.1	1.000008
64500.0	23.1	-46.8			35.6	586.1	231.6	6.7	1.000008
65000.0	22.6	-46.8			34.8	586.2	214.7	7.8	1.000008
65500.0	22.1	-46.7			34.0	586.2	195.7	7.6	1.000008
66000.0	21.6	-46.7			33.2	586.2	190.0	8.0	1.000007
66500.0	21.1	-46.7			32.5	586.3	206.8	6.1	1.000007
67000.0	20.6	-46.6			31.8	586.3	222.1	8.8	1.000007
67500.0	20.2	-46.6			31.0	586.4	234.4	10.0	1.000007
68000.0	19.7	-46.5			30.3	586.6	244.5	11.6	1.000007
68500.0	19.3	-46.2			29.6	586.9	252.2	13.5	1.000007
69000.0	18.9	-46.0			28.9	587.2	258.0	15.5	1.000006
69500.0	18.4	-45.7			28.3	587.5	261.6	17.4	1.000006
70000.0	18.0	-45.5			27.6	587.8	262.0	18.2	1.000006
70500.0	17.6	-45.3			26.9	588.1	262.3	19.0	1.000006
71000.0	17.2	-45.0			26.3	588.4	262.7	19.7	1.000006
71500.0	16.9	-44.8			25.7	588.7	262.9	19.6	1.000006
72000.0	16.5	-44.6			25.1	589.0	263.1	18.9	1.000005
72500.0	16.1	-44.3			24.5	589.3	263.3	18.2	1.000005
73000.0	15.7	-44.1			24.0	589.6	263.4	17.4	1.000005
73500.0	15.4	-43.8			23.4	589.9	258.6	14.6	1.000005
74000.0	15.1	-43.6			22.8	590.2	252.2	12.4	1.000005
74500.0	14.7	-43.4			22.3	590.5	242.7	10.2	1.000005
75000.0	14.4	-43.1			21.8	590.8			1.000005
75500.0	14.1	-42.9			21.3	591.2			1.000005
76000.0	13.8	-42.7			20.8	591.5			1.000005
76500.0	13.5	-42.4			20.3	591.8			1.000005
77000.0	13.2	-41.9							
77500.0	13.0	-41.6							
78000.0	12.8	-41.3							
78500.0	12.6	-41.0							
79000.0	12.4	-40.7							
79500.0	12.2	-40.4							
80000.0	12.0	-40.1							
80500.0	11.8	-39.8							
81000.0	11.6	-39.5							
81500.0	11.4	-39.2							
82000.0	11.2	-38.9							
82500.0	11.0	-38.6							
83000.0	10.8	-38.3							
83500.0	10.6	-38.0							
84000.0	10.4	-37.7							
84500.0	10.2	-37.4							
85000.0	10.0	-37.1							
85500.0	9.8	-36.8							
86000.0	9.6	-36.5							
86500.0	9.4	-36.2							
87000.0	9.2	-35.9							
87500.0	9.0	-35.6							
88000.0	8.8	-35.3							
88500.0	8.6	-35.0							
89000.0	8.4	-34.7							
89500.0	8.2	-34.4							
90000.0	8.0	-34.1							
90500.0	7.8	-33.8							
91000.0	7.6	-33.5							
91500.0	7.4	-33.2							
92000.0	7.2	-32.9							
92500.0	7.0	-32.6							
93000.0	6.8	-32.3							
93500.0	6.6	-32.0							
94000.0	6.4	-31.7							
94500.0	6.2	-31.4							
95000.0	6.0	-31.1							
95500.0	5.8	-30.8							
96000.0	5.6	-30.5							
96500.0	5.4	-30.2							
97000.0	5.2	-29.9							
97500.0	5.0	-29.6							
98000.0	4.8	-29.3							
98500.0	4.6	-29.0							
99000.0	4.4	-28.7							
99500.0	4.2	-28.4							
100000.0	4.0	-28.1							

WIND DIRECTION
WIND SPEED
WIND VELOCITY
WIND DIRECTION
WIND VELOCITY
WIND DIRECTION
WIND VELOCITY

WIND DIRECTION
WIND SPEED
WIND VELOCITY
WIND DIRECTION
WIND VELOCITY

WIND DIRECTION
WIND SPEED
WIND VELOCITY
WIND DIRECTION
WIND VELOCITY
WIND DIRECTION
WIND VELOCITY

WIND DIRECTION
WIND SPEED
WIND VELOCITY
WIND DIRECTION
WIND VELOCITY
WIND DIRECTION
WIND VELOCITY

WIND DIRECTION
WIND SPEED
WIND VELOCITY
WIND DIRECTION
WIND VELOCITY
WIND DIRECTION
WIND VELOCITY

WIND DIRECTION
WIND SPEED
WIND VELOCITY
WIND DIRECTION
WIND VELOCITY
WIND DIRECTION
WIND VELOCITY

STATION ALTITUDE 3997.30 FEET MSL
 30 APR. 79 0830 HRS MST
 ASCENSION NO. 81

MRN SIGNIFICANT LEVEL DATA
 1200060081
 S M R

GEOGRAPHIC COORDINATES
 32°48.03' LAT DEG
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	WIND DATA		E-W MPS	N-S MPS	DEW PT DEP DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
		SPEED MPS	ANGLE DEG					
2934.	9999.**	9999.**	-9999.**	-9999.**	99	99	-42.3	10350+1
2601.	239.	5.	3.	5.	99	99	-46.6	2000+1
2518.	254.	6.	2.	6.	99	99	-46.9	2480+1
2455.	253.	6.	2.	6.	99	99	-50.2	2730+1
2593.	271.	8.	-0.	8.	99	99	-49.3	3000+1
2067.	331.	5.	-5.	5.	99	99	-61.0	5000+1
1961.	308.	6.	-4.	5.	99	99	-59.9	5930+1
1925.	287.	9.	-2.	6.	99	99	-61.4	6280+1
1857.	298.	9.	-4.	8.	99	99	-59.8	7000+1
1812.	308.	13.	-6.	10.	99	99	-57.8	7530+1
1787.	303.	15.	-6.	13.	99	99	-56.7	7830+1
1661.	292.	24.	-9.	22.	99	99	-62.8	9580+1
1635.	293.	25.	-10.	23.	99	99	-62.1	10000+2

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

TIMEZONE FROM URG
 2500Z
 GEOGRAPHIC COORDINATES

DECODED TELETYPE FROM URG
 2500Z
 LATITUDE 32°48.03' N
 LONGITUDE 106.42307 W

TELETYPE FROM URG
 07 APR 80
 0830 HRS
 106.42307 W
 32°48.03' N

STATION ALTITUDE 3997.30 FEET MSL
30 APR. 79 0830 HRS MST
ASCENSION NO. 61

MANDATORY LEVELS
1200060081
S M R

GEOGRAPHIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES	AIR DEPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4900.	12.7	.8.2	74.	169.9	7.0
800.0	6562.	6.7	7.1	69.	168.5	6.7
750.0	8317.	10.0	-8.6	26.	244.6	9.7
700.0	10184.	5.6	-15.6	20.	293.0	15.5
650.0	12152.	.5	-13.9	33.	270.6	21.8
600.0	14243.	-3.1	-25.3	16.	246.8	30.8
550.0	16481.	-8.2	-29.5	16.	263.6	26.6
500.0	18692.	-12.5	-28.4	25.	273.6	34.2
450.0	21502.	-18.4	-28.0	42.	280.5	39.7
400.0	24356.	-23.8	-35.5	32.	287.3	52.0
350.0	27505.	-31.6	-42.6	33.	288.6	57.0
300.0	31014.	-40.9			288.3	58.9
250.0	34995.	-50.4			293.7	76.3
200.0	39664.	-60.4			299.0	70.2
175.0	42359.	-65.8			296.6	76.9
150.0	45432.	-63.6			297.8	69.0
125.0	49109.	-62.9			291.1	58.5
100.0	53640.	-62.1			293.2	48.7
80.0	58163.	-59.1			299.4	33.3
70.0	60936.	-59.8			296.4	18.1
60.0	64094.	-60.2			301.2	13.4
50.0	67811.	-61.0			331.6	10.1
40.0	72415.	-55.9			290.6	4.5
30.0	78512.	-49.3			271.1	16.1
25.0	82435.	-47.2			255.4	12.1
20.0	87290.	-46.6			237.7	10.5
15.0	93595.	-43.6			252.0	12.3

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL
 30 APR. 79 0830 HRS MST
 ASCENSION NO. 81

MRN MANDATORY LEVELS
 12000600081
 S M R

GEODETIC COORDINATES
 32°48'03" LAT DEG
 106°42'30" LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	SPEED MPS	WIND DATA		DEW PT DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
			N-S MPS	E-W MPS			
2853.	252.	6.	2.0	0.0	99	-43.6	1.500+1
2661.	238.	5.	2.0	0.0	99	-46.6	2.000+1
2513.	255.	6.	2.0	0.0	99	-47.2	2.500+1
2393.	271.	5.	2.0	0.0	99	-49.3	3.000+1
2207.	291.	2.	2.0	0.0	99	-55.9	4.000+1
2067.	332.	5.	2.0	0.0	99	-61.0	5.000+1
1953.	301.	7.	6.	6.	99	-60.2	6.000+1
1857.	298.	9.	7.	7.	99	-59.8	7.000+1
1773.	299.	17.	15.	15.	99	-59.1	8.000+1
1635.	293.	25.	23.	23.	99	-62.1	1.000+2
1497.	291.	30.	28.	28.	99	-62.9	1.250+2
1395.	298.	35.	31.	31.	99	-63.6	1.500+2
1291.	297.	40.	35.	35.	99	-65.8	1.750+2
1209.	299.	39.	34.	34.	99	-60.4	2.000+2
1067.	294.	39.	36.	36.	99	-50.4	2.500+2
945.	286.	30.	29.	29.	99	-40.9	3.000+2
838.	289.	29.	26.	26.	11	-31.8	3.500+2
742.	287.	27.	26.	26.	12	-23.8	4.000+2
655.	280.	20.	20.	20.	10	-18.4	4.500+2
570.	274.	18.	16.	16.	16	-12.5	5.000+2
502.	264.	14.	14.	14.	21	-8.2	5.500+2
434.	249.	16.	15.	15.	22	-3.1	6.000+2
370.	271.	11.	11.	11.	14	.3	6.500+2
310.	293.	8.	7.	7.	21	5.6	7.000+2
254.	245.	5.	5.	5.	19	10.0	7.500+2
200.	169.	3.	2.	2.	02	8.7	8.000+2
149.	170.	2.	1.	1.	05	12.7	8.500+2